IN THE DRAWINGS:

Please substitute the attached replacement formal drawings, Figures 4 and 8-10, for the original informal drawings in the application. The replacement drawings do not introduce new matter.

IN THE SPECIFICATION:

Applicants have deleted reference to Attachments A-D. Applicants reserve the right to incorporate any essential matter in the application to support the claims as filed as presented in Attachments A-D as filed.

REMARKS

These remarks are in response to the Office Action mailed September 15, 2005.

I. OBJECTION TO THE CLAIMS

Claims 1 and 2 and 8 stand objected to as allegedly reciting material drawn to a non-elected invention. Applicants respectfully traverse and request that the Examiner clarify the objection as the claims elected were as set forth in the restriction/election requirement mailed February 8, 2005.

II. REJECTION UNDER 35 U.S.C. §112, FIRST PARAGRAPH

Claims 1-3 and 8 stand rejected under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the written description requirement. In particular, the Office Action alleges that the claims are directed to a vast genus of antibodies, the members of which recognize the gacS protein and that the specification allegedly fails to fulfill the written description requirement by not providing a substantial number of members of the claimed genus. Applicants respectfully traverse this rejection.

Applicants submit that gacS is a known protein (previously known as ApdA and LemA). The Examiner is directed to GenBank accession numbers:AAA87840 and AAC06221. Thus, the protein sequence of gacS is known. The Examiner is respectfully directed to the USPTO's own Interim Written Description Guidelines at Example 16, "Antibodies", attached hereto as Exhibit "A", which state, in part:

> The specification contemplates but does not teach in an example antibodies which specifically bind to antigen X and asserts

> that these antibodies can be used in immunoassays to detect HIV. The general knowledge in the art is such that antibodies are structurally well characterized. . .
>
> A review of the full content of the specification indicates that antibodies which bind to antigen X are essential to the operation of the claimed invention. The level of skill and knowledge in the art of antibodies at the time of filing was such that production of antibodies against a well-characterized antigen was conventional. This is a mature technology where the level of skill is high and advanced.
>
> The claim is directed to any antibody which is capable of binding to antigen X. . . .
>
> Considering the routine art-recognized method of making antibodies to fully characterized antigens, the well defined structural characteristics for the five classes of antibody, the functional characteristics of antibody binding, and the fact that the antibody technology is well developed and mature, one of skill in the art would have recognized that the spectrum of antibodies which bind to antigen X were implicitly disclosed as a result of the isolation of antigen X.
>
> Conclusion: The disclosure meets the requirement under 35 USC 112 first paragraph as providing an adequate written description of the claimed invention.

Thus, Applicants submit that the USPTO's own guidelines indicate that if the structural characteristics of a protein are known, antibodies directed to such a protein are sufficiently known and described based upon the high level of skill in the art of immunology/antibody development. Furthermore, the Office Action at page 9 indicates, "...the skill in the art of immunology is high," corroborating the Guidelines above. Accordingly, Applicants respectfully request withdrawal of the rejection.

Claims 1-3 and 8 stand rejected under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the enablement requirement. In particular, the Office Action alleges that the specification shows only knockout mutants of gacS, which allegedly does not provide enablement for the use of anti-gacS antibodies in the prevention of biofilm formation. Applicants respectfully traverse this rejection.

The Examiner contends that there are no working examples demonstrating the efficacy of claimed methods and that the specification is silent with respect to the use of specific anti-gacS antibodies for the prevention of biofilm formation. Further, the Examiner contends that the specification is silent as to which specific antibody, if any, would be effective to prevent the biofilm formation of a given microorganism.

The predictability in the art refers to the ability of one skilled in the art to extrapolate the disclosed results to the claimed invention. Applicants respectfully submit that one skilled in the art can readily anticipate the effect of the use of anti-gacS antibodies with the described knockout mutants of gacS disclosed in the specification. Additionally, one skilled in the art can readily determine that antibodies of the GacA/GacS regulatory system can also be used to inhibit biofilm formation, with the examples beginning at paragraph [0020] on page 8, and Figure 8. Accordingly, withdrawal of this rejection is proper and respectfully requested.

III. REJECTION UNDER 35 U.S.C. §112, SECOND PARAGRAPH

Claims 1-3 and 8 stand rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, specifically, failing to recite the active steps that need to be performed in the claimed method in order to achieve the stated goal of "preventing biofilm formation."

Applicants have amended claim 1 to recite the active step, as suggested by the Examiner. Accordingly, Applicants respectfully request that the rejection be withdrawn.

Respectfully submitted,

BUCHANAN INGERSOLL LLP

Date: March 15, 2005

By: _____
Susan B. Fuller
Registration No. 51,979

12230 El Camino Real
Suite 300
San Diego, CA 92130-2090
(858) 509-7300